Question Paper
ANMC Mock Test Class 7 - Algebra (Paper 5)

Exam ID : TEST/2024/01/05134454 Report Generation Date : 3/26/2024 3:00:29 PM

Q1: If x + 1/x + 2 = 0 then the value of (x+3)2 + 1/(x+3)2 is:

A: 4

B: 4 3/4

C: 4 1/4

D: 4 1/2

Answer: C

Q2: If a – 3b = 2, then the value of (a3 - 27b3 - 18ab) is:

A: 6

B: 8

C: 9

D: 7

Answer: B

Q3: If a + b + c = 4 and a2 + b2 + c2 = 10 and 1/a + 1/b + 1/c = 1 then find abc.

A: 5

B: 3

C: 4

D: 6

Answer: B

Q4: If x = (0.04)2, y = 1/(0.04)2 and z = (1 - 0.04)2, then out of the following, the true relation is:

A: y < x < z

B: z < x < y

C: x < z < y

D: y < z < x

Answer: C

Q5: If x2 + 6x + 1 = 0, then find x2 + 1/x2

A: 34

B: 36

C: 38

D: 40

Answer: A

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Q6: If a + b + c = 5 and a2 + b2 + c2 = 12 and 1/a + 1/b + 1/c = 3 then find abc.

A: 12/5

B: 15/7

C: 13/6

D: 16/7

Answer: C

Q7: If x + 1/x = -2 then the value of (x2 + x + 1)/(x2 - 6x + 1) is:

A: 3/8

B: 1/8

C: 5/8

D: 7/8

Answer: B

Q8: If x – 1/x = 3 then find the value of x3 + 1/x3 - 5(13)1/2

A: 4(13)1/2

B: (13)1/2

C: 13

D: 5(13)1/2

Answer: D

Q9: If x1/2 + 1/x1/2 = 2 then find the value of 6x2 + 1/6x2

A: 37/6

B: 6

C: 35/6

D: 31/6

Answer: A

Q10: If 1 – 512x3 – 24x + (184 + a)x2 = (1 – ax)3 then find the value of a.

A: 64

B: 6

C: 8

D: 16

Answer: C

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Q11: If a2 – b2 + c2 = 0, then the value of 2(a6 + c6 – b6)/3(a2 + c2):

A: a2c2

B: -2a2c2

C: 2a2b2

D: -b2c2

Answer: B

Q12: If [16(2)1/2 x3 + 81(3)1/2 y3] ÷ [2(2)1/2 x + 3(3)1/2 y] = (Ax2 + By2 + Cxy) then find the value of 5A - 3B - C(6)1/2

A: 8

B: -5

C: -2

D: 6

Answer: B

Q13: If (x + y) = 1 and (3/x) – 3y = 6/x then find the value of x2 + y2

A: 4

B: 2

C: 3

D: 1

Answer: C

Q14: If x + y = 12 and xy = 10 then find the value of 1/x2 + 1/y2

A: 1.20

B: 1.32

C: 1.28

D: 1.24

Answer: D

Q15: If 3x – 3/x = 7 then find the value of x3 – 1/x3 – (343/27)

A: 0

B: 7/3

C: 7

D: 3

Answer: C

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Q16: If a2 + b2 + c2 = 2(2a - b - 2c - 4) -1, then the value of (a - b + c + 2) is:

A: 1

B: 4

C: -1

D: 3

Answer: D

Q17: If x + 1/x = 1 then find the value of (x9 + 1/x9)3

A: – 8

B: 8

C: 1

D: – 1

Answer: A

Q18: If a3 + b3 = 45 and a + b = 3 then find the value of a2 + b2

A: 13

B: 16

C: 15

D: 12

Answer: A

Q19: If 3x2 – x + 1 = 0 then find the value of 9x2 + (1/x)2:

A: 9

B: – 5

C: 6

D: – 4

Answer: B

Q20: If (a – 7b – 2)2 + (3c – a – 8)2 = 0 then find the value of 3c – 7b:

A: 15

B: 10

C: 12

D: 8

Answer: B

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Q21: Simplify: (a + 2b – c – d)2 – (3a – b + c – d)2 + 8a2 – 3b2 – 10ab + 2bc – 4cd + 8ac – 4ad + 6bd

A: 1

B: 2

C: 0

D: 4

Answer: C

Q22: If a2 + b2 – 2c2 = 0, then the value of (a6 + b6 – 8c6)/(a2 + b2):

A: –3a2b2

B: –2a2c2

C: 2a2b2

D: –b2c2

Answer: A

Q23: If x4 + x–4 = 47 then find the value of (x – x–1)

A: 0

B: 5

C: 1

D: (5)1/2

Answer: D

Q24: If (x + y) = 3 and (2/x) – 4y = 10/x then find the value of x2 + y2

A: 15

B: 13

C: 10

D: 18

Answer: B

Q25: If (x + y)2 = 544 and xy = 16 then find the value of 1/x2 + 1/y2

A: 1

B: 4

C: 3

D: 2

Answer: D

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Q26: If x2 + y2 = 72 and x – y = 8 then find the value of xy

A: 0

B: 4

C: 1

D: 2

Answer: B

Q27: If a = 205, b = 207 and c = 209 then find a3+b3+c3 – 3abc.

A: 7452

B: 7456

C: 7450

D: 7460

Answer: A

Q28: If (a – b) = 3, (b – c) = 6 and (c – a) = – 9 then the value of:
(a3+b3+c3 – 3abc)/(a+b+c) is:

A: 51

B: 74

C: 63

D: 78

Answer: C

Q29: If (64)1/2 × (75)1/2 = x(12)1/2, then the value of x is:

A: 25

B: 20

C: 10

D: 15

Answer: B

Q30: If a = 156, b = 160 and c = 150 then find a3+b3+c3–3abc.

A: 35402

B: 35424

C: 35420

D: 35416

Answer: D

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